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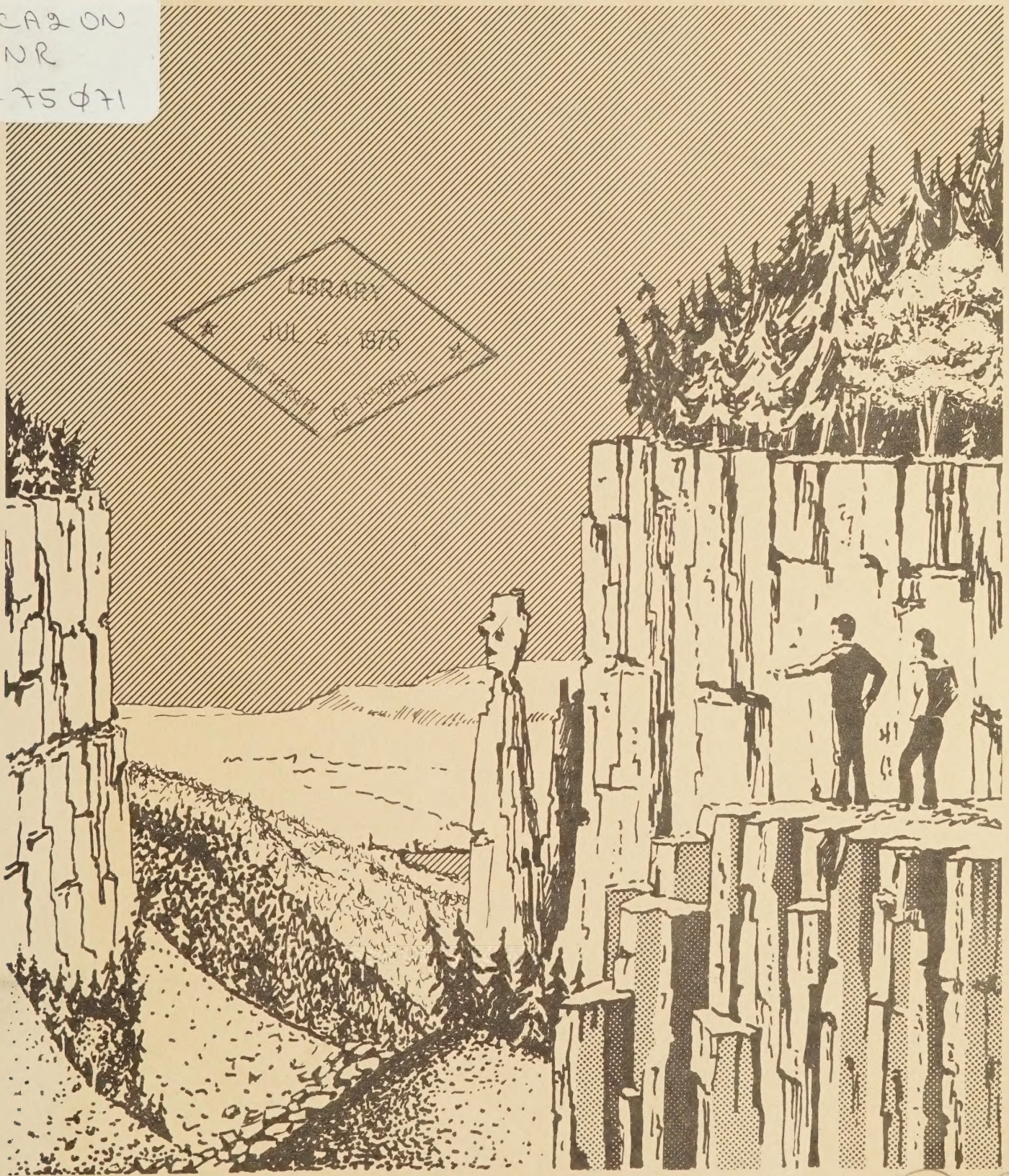
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# Ouimet Canyon Provincial Park

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## Master Plan

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# Ouimet Canyon Provincial Park

## Master Plan



Ontario

**Ministry of Natural Resources**

Hon. Leo Bernier  
Minister

Dr. J.K. Reynolds  
Deputy Minister



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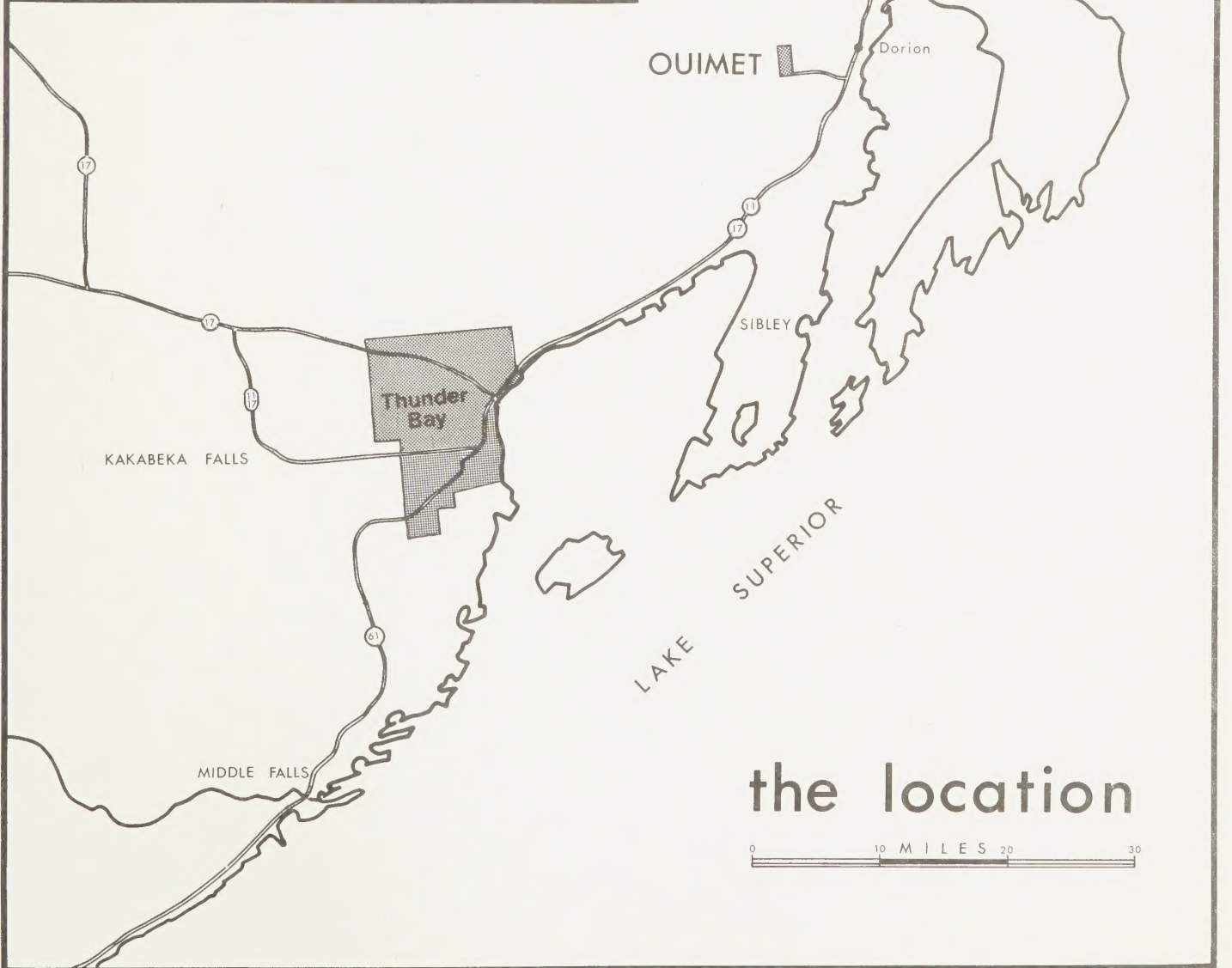
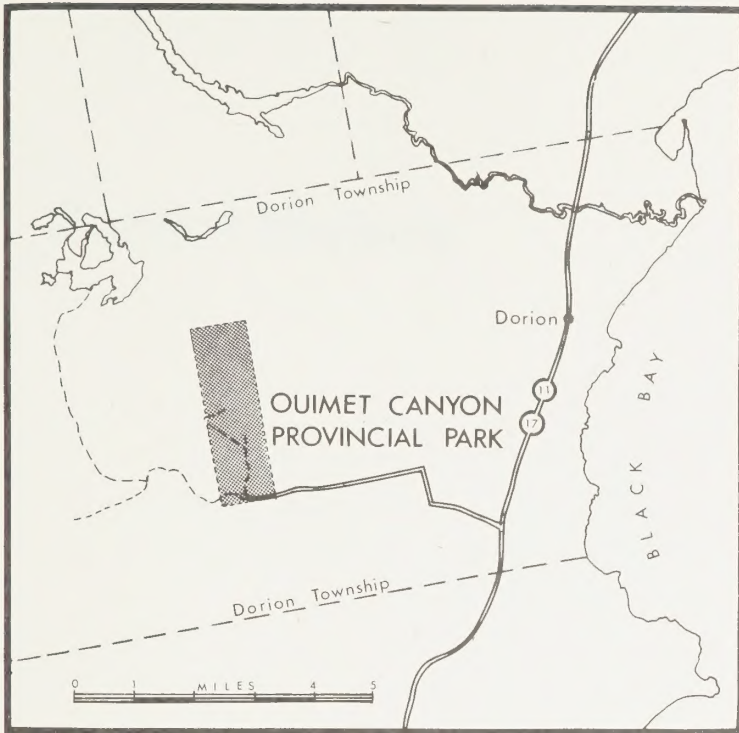
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# Introduction

Ouimet Canyon Provincial Park will be a precious element of the Ontario Nature Reserves System. A spectacular demonstration of nature's violent forces during the earth's geological past is presented to the visitor's eyes as the magnificent vistas of the canyon unfold below. On the floor of the gorge are found plant communities far removed from their usual centres of distribution. The park visitor will have an opportunity in his hurried life to experience the stillness and listen to the silence.







## Recent History

It is evident that people have known of Ouimet Canyon for many years. Early homesteaders in the vicinity borrowed its name from nearby and since forgotten "Ouimet", a station on the Canadian Pacific Railroad established in 1885. The name, now officially recognized, honours Joseph Alderic Ouimet, a soldier, politician and judge in Canadian history.

In more recent times, there are records of limited commercial utilization of Ouimet Canyon. Two registered traplines extended into the area, but no significant amount of fur was ever harvested. There is no history of mining, claim-staking, or commercial fishing. During the 1960's quantities of aspen and some spruce were logged. Since then, major portions of these cutover areas have been replanted.



# The Park Environment

## Geology and Geomorphology



The park area is divided into eastern and western sectors by the presence of a spectacular canyon generally oriented in a north-south direction. This massive, steep-walled gorge has resulted mainly from erosion, which took place prior to, during, and after the last ice age. The erosion occurred along a large joint or crack within a diabase (igneous rock) sheet. The resultant gorge, approximately 500 feet across, descends to an impressive 300-350 feet below. The sheer nature of the cliff walls demand caution and respect on the part of spectators approaching the rim.

Although the diabase cliffs are the most conspicuous outcrop, two additional rock types are also present: a pale pink granite, igneous in origin and widespread throughout much of the Canadian Shield; and red mudstone, sedimentary in origin and part of what is termed the Sibley Formation. However, exposures of both granite and mudstone are limited. All rock types are of Precambrian age, having been formed more than 600 million years ago.

The diabase sheet (sill), in which the canyon occurs, was formed from an intrusion of molten rock into the older sediments. These sheets presently cover numerous broad tablelands, generally demarcated from lowland areas by cliffs. These tablelands are geologically referred to as the Port Arthur Hills. Different rates of erosion have exposed the resistant diabase at the expense of the more easily eroded sediments.

The sill into which the canyon has been cut exhibits prominent vertical (often columnar) jointing.





These joints appear as conspicuous cracks in the cliff face. This accounts for the precipitous nature of the canyon walls. Through the process of weathering, large quantities of fallen rock (talus) have accumulated on the floor below. The scale of this erosion is indicated by the extent of the boulder-like debris. Talus sloping from opposite walls converges on the canyon floor. The slopes sometimes exceed an angle of 45 degrees. The largest blocks, some as much as 30 feet across, gravitate toward the bottom. Smaller boulders are usually found progressively higher up the slope.

The conditions which produced the canyon are widespread. Many other canyons occur in the area. Most, however, are not so spectacular. Some have been partly filled by glacial debris. It has been suggested that Ouimet Canyon remained clear of debris because it functioned as a channel carrying meltwaters from the receding glaciers. Erosion by ice and water likely contributed to the formation of the canyon.

There are additional indications of glacial action in the park: till deposits cover much of the bedrock in the canyon area; outwash deposits are left at the south end of the park; and poorly formed glacial striae (scratches and grooves) may be seen on many rock surfaces.

It appears probable that the erosion of the canyon walls is of a lesser magnitude at present than it has been in the past. The talus slopes generally exhibit a fair degree of stability, especially where the block size is large.





There is evidence of recent rock-falls; however these are infrequent.

Erosion, still active, is evidenced by the presence of opened cracks which illustrate the movement of diabase blocks away from the cliff. Although some shifting still occurs, due to gravity and freeze-thaw action, the talus slopes adjacent to the cliffs have accumulated to a point where they help support the canyon walls.

An interesting feature which portrays the jointing pattern in the diabase is referred to as the Indian Head, a prominent diabase pinnacle generally configured as its name implies. This block has been isolated from the canyon wall by selective erosion. Its location proximal to the lookout area on the west rim makes it readily visible to the park visitor.



# Vegetation Flora and Fauna



Ouimet Canyon is located within the Nipigon Section of the Boreal Forest Region. This Section is a relatively narrow belt confined to the north shore of Lake Superior. Generally it occurs between Wawa on the east and Thunder Bay to the west. The combined climatic effect of Lake Superior, James and Hudson Bay, have played a part in determining both the location and character of this Section.

The diversity of plant associations occupying the extensive Nipigon Section is not fully represented in the park. However, the vegetation of this site provides a good illustration of the combined effects of climatic, geologic and geomorphic controls peculiar to Ouimet Canyon. Several forest types occur in the park and immediately surrounding area.

Sites containing a substantial veneer of soils derived from till or outwash deposits support a forest cover usually dominated by trembling aspen or white birch. In the southern sector of the park, pure stands of the former species occur. Such stands are aesthetically pleasing, frequently supporting a lush array of shrubs and herbs. In many instances, forests on such sites assume a more mixed character. Balsam fir, white spruce, and other species are often present.

Stands of jack pine and black spruce are frequently found in thin soils. Some individual specimens exhibit a stunted form. Bare bed-rock sites support a forest type of similar composition. However, under such conditions the forest canopy is usually quite open. The scattered occurrence of trees is controlled by fissures which allow

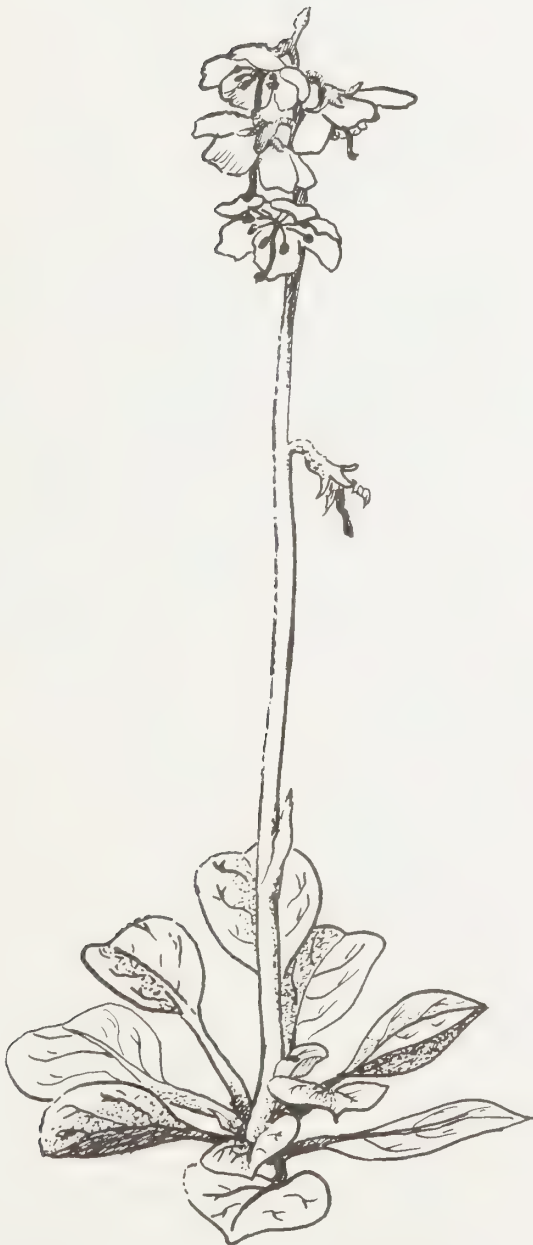


rooting. The best examples of this forest type are located along the canyon rim. Its open nature affords several excellent vistas.

Forested lowland areas around the park are generally characterized by the presence of black spruce or white cedar. In some locations black ash may also be found. The margins at small lakes and ponds frequently support aquatic and wetland associations. However, these are not extensive in the park.

The best example of the combined effect of climate and landform control on the vegetation and flora is expressed within the canyon. The canyon formation has permitted the establishment of a number of peculiar ecologic conditions. These have resulted in the occurrence of a narrow strip of unusual vegetation along the bottom of the gorge. Here are found some plants characteristic of Arctic-alpine communities. These are best represented in depressions between the infrequent cross-canyon talus ridges. These depressions retain cold air, which emanates from accumulations of stagnant ice formed beneath the talus during the winter. This ice may persist throughout the year. Factors such as the short periods of sunlight, the thick, insulating moss carpets, and daily cold air movements contribute to this condition.

The occurrence of several plant species associated with these Arctic communities is of regional significance. For example, Ouimet Canyon represents the most southerly known location for the very attractive Arctic wintergreen. At one location, several thousand







specimens of this plant occur. The area also supports the southernmost known location for two conspicuous plants, neither of which possess common names: a moss, known as Aulacomnium acuminatum, a liverwort, Temnome setiforme.

In addition to the above mentioned species, a number of Arctic, sub-Arctic, and Boreal plants have been identified. The Arctic plants may be referred to as relicts, since they represent remnants of communities which were widespread in the colder environment adjacent to the glacial front. However, these have been greatly reduced in extent following the encroachment of the Boreal Forest. The unusual ecologic conditions represented on the floor of Ouimet Canyon have insured the persistence of these communities.

Additional peculiarities of the vegetation substantiate the harsh climate. Most notable is the delayed leafing and flowering of the plants in response to the "late" spring and summer. Also unusual is the stunted and dwarfed appearance of several shrub species. The Pussy Willow, normally an upright shrub, occasionally exhibits a peculiar prostrate habit. Its form is characterized by low mat-like growth with the branches trailing through the thick moss carpets. On occasion white cedar assumes a similar depressed appearance on the talus slopes.

Other interesting plant communities characterize the vegetation of the canyon. Associations of mosses, lichens, and dwarfed white birch, cling to the lower reaches of the talus debris. Higher up are associations consis-





ting almost exclusively of lichens. At the uppermost portion of the talus slope a narrow band of white birch predominates. These form a gallery at the base of the Canyon walls. Recent rockfalls and talus slides are readily identified by the lack of lichen cover on the freshly exposed rock.

In addition to the unusual flora occupying the canyon, several other plant species uncommon in the Thunder Bay district are found in the park.

The fauna of the park area has not been so thoroughly documented as the plant life. Brief reconnaissance of the vertebrates suggest that they are representative of this portion of Ontario. More detailed investigation is necessary to establish this fact. Perhaps the most interesting studies relate to the micro-fauna associated with the relict Arctic flora. These may shelter small Arctic invertebrates which have been overlooked to date.



# The Master Plan

## Park Goal

The park goal is to provide, for the people of Ontario, scenic enjoyment, education, and scientific benefits associated with the unique geological and ecological resources at Ouimet Canyon.

## Park Policy

The park will consist largely of natural zone (Map. no. 3) with a relatively small access corridor along which there will be nodes to accommodate a trailer parking area, a picnic area, and a parking area near the rim for canyon viewers.

Activities appropriate for a nature reserve include quiet pastimes such as scenic viewing, nature study, hiking, snowshoeing, and canoeing. Self - conducted trails, wayside exhibits and other interpretive facilities will convey to the visitor the interesting geological and ecological stories of the park. Some noisy and intensive activities would destroy the extraordinary qualities of the park and impair the high quality environmental experience. For this reason all-terrain vehicle uses, snowmobiling, organized team sports, hunting, horseback riding and camping will be prohibited.

Scientific studies of a non-destructive nature may be carried out by competent researchers. Normal application and approval procedures for research in Provincial Parks must be followed.

Public access will not normally be permitted into the botanically fragile canyon floor because intrusions could serve to alter and possibly destroy this unique ecological resource. Travel into the bottom of the canyon will be allowed only by competent researchers engaged in approved non-destructive scientific studies.



Forest Management will include only control of fires, insects, disease and sanitation cutting of trees in public use areas when necessary for public safety.

Fish and Wildlife management will not be carried out within the Natural Zone, however, a fish stocking program aimed at providing quality fishing in Gulch Lake will be continued.

## Park Zones

The visitor to Ouimet Canyon will enter the Access Zone, a scenic parkway through pleasant forested countryside. Along the way he may wish to try his luck at fishing. Continuing along the road the visitor will arrive at the parking lot. Wayside exhibits, signs, and an interpretive naturalist, will orient him and help explain the interesting geology and biology of the area.

The visitor is introduced to the Natural Zone via a footbridge and trail which lead across a picturesque ravine to the canyon rim. The lookout area will be so designed as to afford the best view of the canyon while at the same time assuring a reasonable degree of safety.

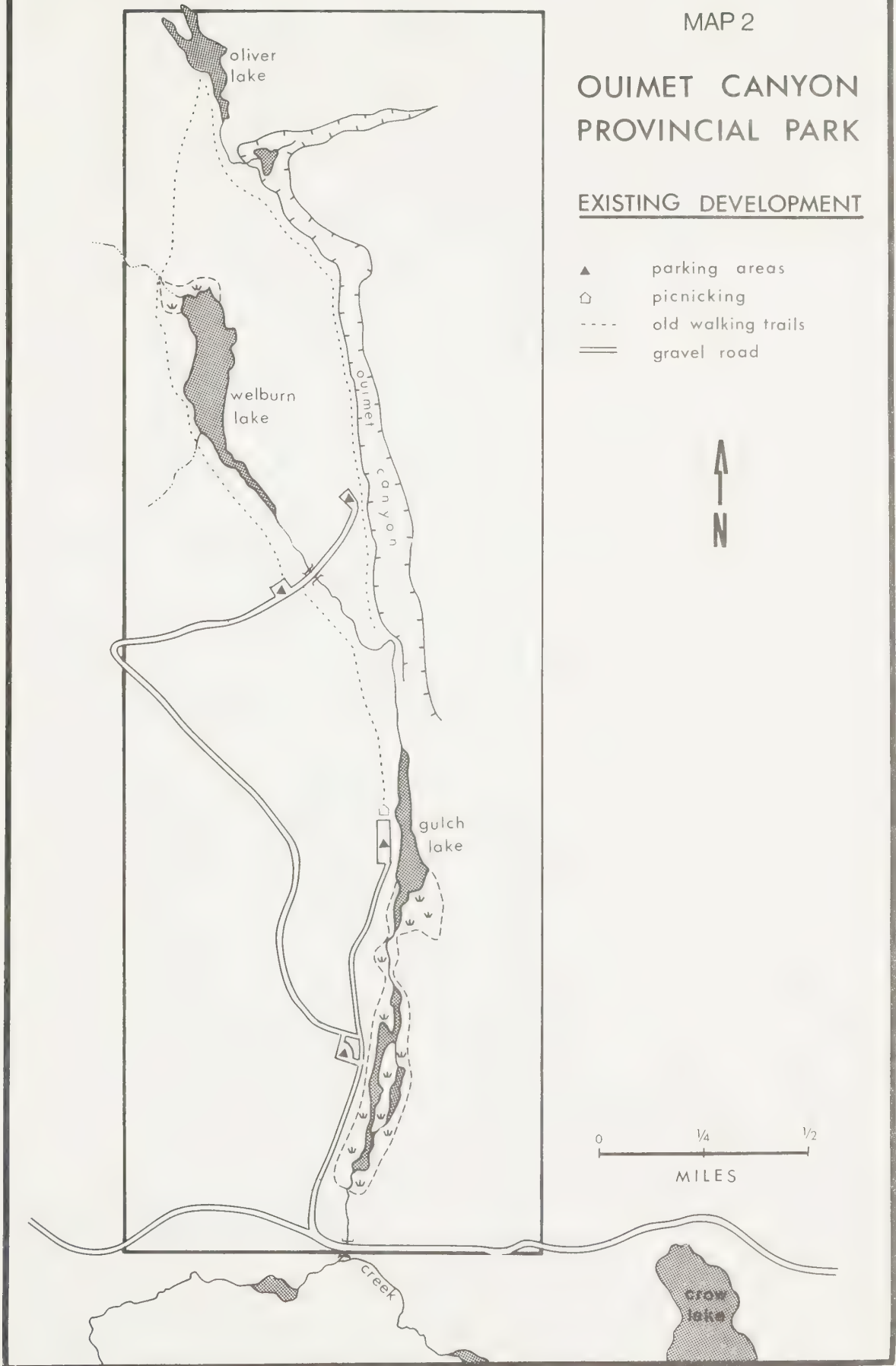


MAP 2

OUIMET CANYON  
PROVINCIAL PARK

EXISTING DEVELOPMENT

- ▲ parking areas
- ⬢ picnicking
- old walking trails
- == gravel road



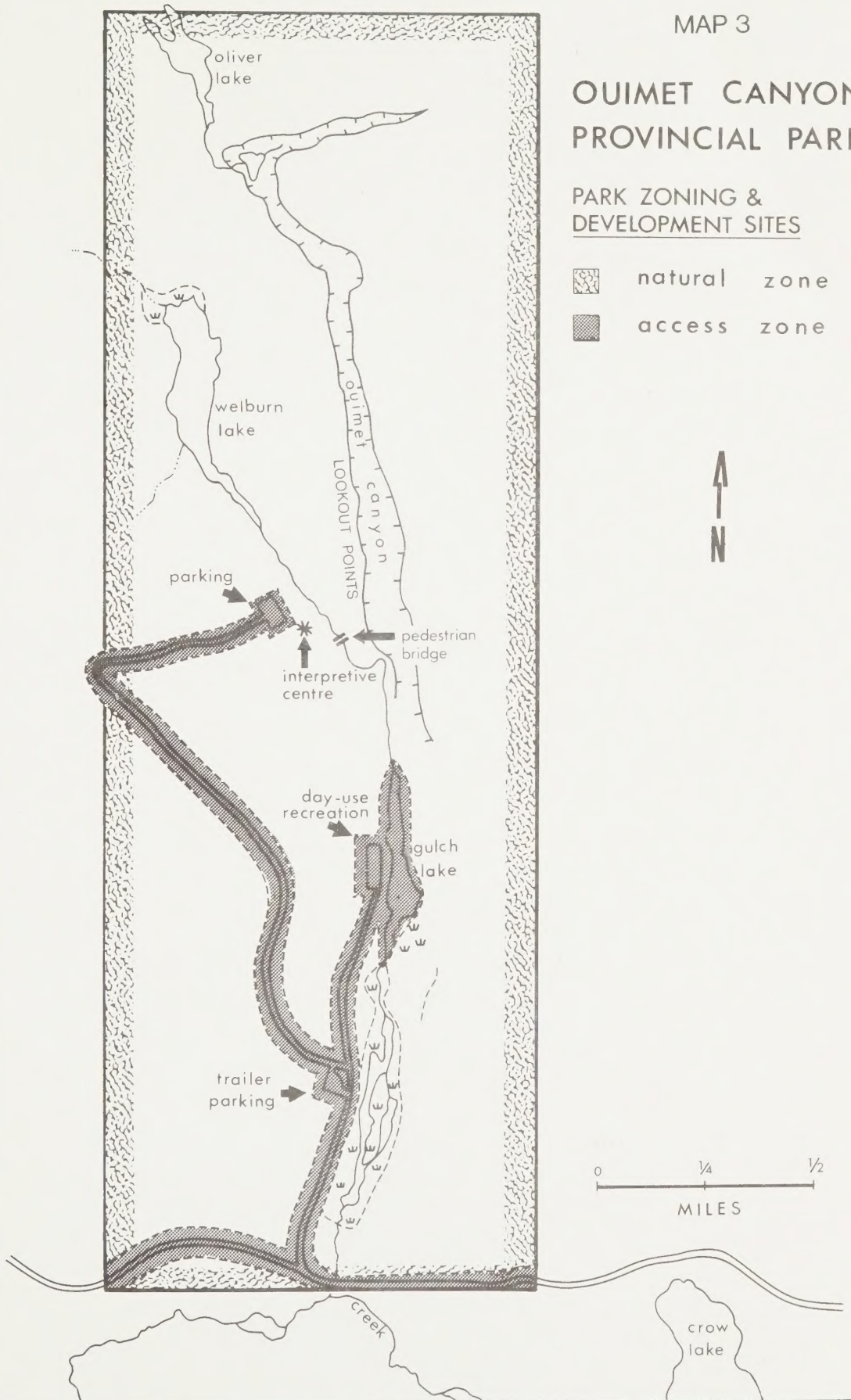


MAP 3

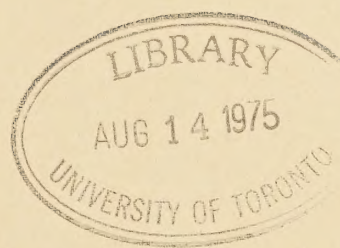
# OUIMET CANYON PROVINCIAL PARK

## PARK ZONING & DEVELOPMENT SITES

-  natural zone
-  access zone









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